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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/519,710

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EXAMINER

JANG, CHRISTIAN YONGKYUN

ART UNIT

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3735

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/519,710	Applicant(s) KAWADA ET AL.	
	Examiner CHRISTIAN Y. JANG	Art Unit 3735	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-20 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. Preliminary amendment submitted on 12/30/2004 has been accepted by the examiner. Claims 1-20 are currently pending.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

3. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because of the reasons indicated by the draftsman on the attached Form PTO-948. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

4. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

Art Unit: 3735

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

6. The abstract of the disclosure is objected to because it exceeds 150 words, includes phrase "means for" and refers to the purported merits of the invention.

Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

9. As to claim 1, the claim states that a pulse wave propagation through an intracerebral blood vessel is detected on the basis of a change in the diameter of an eyeground vein. However, the disclosure provides no equation or algorithm to show how the two variables may be related. On that basis, the claim contains subject matter which is not described in the specification to enable one skilled in the art to make or use the invention. The examiner notes that the change in eyeground vein diameter directly reflects the pulse wave propagation, in which case no equation/algorithm may be necessary. If so, however, any device which can detect the change of said vein diameter would inherently detect the pulse wave propagation through said intracerebral blood vessel. Clarification is required. Claims 2-11 are rejected for being dependent upon claim 1.

Claim Rejections - 35 USC § 101

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claims 10, 11, 19 and 20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 10 and 19 are directed

towards a computer program, which is non-tangible and therefore considered non-statutory.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 1-3, 5-12, and 14-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Vilser (USP #6,621,917).

14. As to claim 1, Vilser teaches a pulse wave propagation detection system comprising electrocardiographic signal detection means (col. 17, line 54 to col. 18, line 4), and eyeground image detection means for detecting an eyeground image in synchronization with an electrocardiographic signal detected through the detection means (col. 4, lines 39-53; claim 64), which system detects pulse wave propagation through an intracerebral blood vessel on the basis of a change in the diameter of an eyeground vein (col. 2, line 64 to col. 3, line 11; as expounded above, the examiner considers pulse wave propagation to be inherently detected based on the change in diameter of the eyeground vein), the diameter being measured by use of an eyeground

Art Unit: 3735

image synchronized with an arbitrary electrocardiographic signal (col. 17, line 54 to col. 18, line 4).

15. As to claim 2, Vilser teaches a pulse wave propagation detection system comprising electrocardiographic signal detection means (col. 17, line 54 to col. 18, line 4), and eyeground image detection means for detecting an eyeground image in synchronization with an electrocardiographic signal detected through the detection means (col. 4, lines 39-53; claim 64), which system detects the state of sclerosis of a capillary artery by detecting pulse wave propagation through the artery on the basis of a change in the diameter of an eyeground vein (col. 26, lines 34-42), the diameter being measured by use of an eyeground image synchronized with an arbitrary electrocardiographic signal (col. 17, line 54 to col. 18, line 4).

16. As to claims 3 and 12, Vilser teaches a pulse wave propagation detection system wherein the change in the eyeground vein diameter is a change in the diameter of an eyeground vein at the optic papilla (col. 3, line 66 to col. 4, line 7).

17. As to claims 5 and 14, Vilser teaches a pulse wave propagation detection system wherein detection of an eyeground image is performed by use of software which can provide an eyeground image synchronized with an electrocardiographic signal by extracting, on a computer display, a stationary eyeground image synchronized with an arbitrary electrocardiographic signal from a motion eyeground image (claim 1; col. 27 lines 10-37).

18. As to claims 6 and 15, Vilser teaches a pulse wave propagation detection system wherein the software which can provide an eyeground image synchronized with an

electrocardiographic signal is software which enables extraction of a stationary eyeground image synchronized with an arbitrary electrocardiographic signal while displaying a motion eyeground image and an electrocardiogram on display means of a computer terminal (col. 4, line 53 to col. 5, line 7).

19. As to claims 7 and 16, Vilser teaches a pulse wave propagation detection system wherein the software includes a program for executing means for calculating a change in the diameter of an eyeground vein on the basis of the eyeground image synchronized with an arbitrary electrocardiographic signal (col. 2, line 64 to col. 3, line 11).

20. As to claims 8 and 17, Vilser teaches a pulse wave propagation detection system wherein the software includes a program for executing means for correlating the change in the eyeground vein diameter with pulse wave propagation through an intracerebral blood vessel, thereby detecting the pulse wave propagation (As previously stated, the examiner is considering the correlation to be inherent).

21. As to claims 9 and 18, Vilser teaches a pulse wave propagation detection system wherein the software includes a program for executing means for correlating the change in the eyeground vein diameter with sclerosis of a capillary artery, thereby detecting the state of sclerosis of the capillary artery (col. 26, lines 34-42).

22. As to claims 10 and 19, Vilser teaches a computer program comprising an algorithm for executing software employed for implementing a pulse wave propagation detection system as recited in claims 5 and 14 (claim 1; col. 27 lines 10-37).

23. As to claims 11 and 20, Vilser teaches an electronic medium containing software which is executed by means of a computer program as recited in claims 10 & 19 (claim 1; col. 27 lines 10-37).

Allowable Subject Matter

24. Claim 4 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action, and if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

25. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

26. Claims 4 and 13 are indicated as allowable subject matter because the prior art of record does not teach that the change in diameter is the difference between the diameter as measured on the basis of an image synchronized with an R wave and a T wave. Vilser teaches the use of an image in synchronization with an R wave. While it is conceivable that the T-wave could also be used, it would not be obvious to use the difference between the two to record the change in diameter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTIAN Y. JANG whose telephone number is (571)270-3820. The examiner can normally be reached on Mon. - Fri. (8AM-5PM) EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor II can be reached on 571-272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert L. Nasser Jr/
Primary Examiner, Art Unit 3735

CJ
/C. Y. J./
Examiner, Art Unit 3735
4/12/08